

CLAIMS

1. A method of printing digital print files in a network system including a print service and a plurality of printers, wherein a digital print file includes print image data and metadata specifying job information including a required number of copies to be printed, and wherein at least one of the printers is provided with a local memory and a local operator control unit with an inputting unit and a display and is adapted for permitting interactive printing, the interactive printing representing printing a print file only upon selection of that print file and entering a print command through the operator control unit, the method comprising:

a first step of, by the print service, receiving print files, storing the received print files in a storage, and distributing information on the stored print files, including metadata, to a plurality of the printers; and

a second step of starting a print process for a first print file in one of the printers and, while said print process is active, starting an interactive print process for the first print file in another one of the printers,

wherein the print service controls the printers processing said first print file to print together a total number of copies of the first print file, which is equal to the required number of copies specified in the metadata of said print file.

2. The method according to claim 1, wherein said first step comprises:

receiving a print file at the print service;

storing said print file in a storage;

extracting, by the print service, at least part of the metadata of said print file;

transmitting, by the print service, said extracted metadata to a plurality of the printers; and

receiving said metadata by said plural printers and providing said metadata to a local file selection mechanism resident in the operator control units of each of said plural printers.

3. The method according to claim 1, wherein the printers printing said first print file report the finishing of each copy of said first print file to the print service, and obtain permission from the print service for starting printing of each new copy of the

first print file, and wherein the print service gives said permission with reference to the number of copies contained in the metadata of said first print file.

4. The method according to claim 1, further comprising:

in reaction to a selection by an operator at a printer, fetching the print data of the selected print file from the storage and printing the selected print file.

5. The method according to claim 1, further comprising:

communicating status changes of a print file to all printers which have the associated metadata.

6. The method according to claim 5, wherein a status change of a print file is reported, by a printer in which said status change takes place, to the print service, and wherein the print service communicates the reported status change to the printers that have the associated metadata.

7. The method according to claim 5, further comprising:

updating local print selection mechanisms of the printers in accordance with reported status changes of print files.

8. The method according to claim 5, wherein the status changes include starting a print process for a copy of the print file, finishing a print process for a copy of the print file, deleting the print file, and changing the required number of copies by an operator by using the operator control unit of a printer.

9. The method according to claim 1, further comprising:

maintaining, by the print service, a list of all print files in the system, including the metadata of said files.

10. The method according to claim 1, wherein said print service is implemented as a server connected to a network.

11. The method according to claim 1, wherein each connected printer is provided with a server process that is logically connected to the server processes in the other printers, and wherein the server processes together form a distributed print service.

12. The method according to claim 1, wherein a print file for coordinated concurrent processing in at least two of the printers includes a metadata item identifying the coordinated concurrent processing.

13. A printing system for printing digital print files, wherein a digital print file includes print image data and metadata specifying job information including a required number of copies to be printed, the system comprising:

a plurality of printers, each being provided with a local memory, a local operator control unit provided with an inputting unit and a display and including a file selection mechanism adapted for interactive printing, the interactive printing representing printing a print file only upon selection of that print file and entering a print command through the operator control unit;

a print service being adapted to receive print files, to store the received print files in a storage, and to distribute information on the stored print files, including metadata, to the plurality of the printers; and

a network for interconnecting the printers, the print service and one or more personal workstations,

wherein the print service is adapted to permit starting a print process for a first print file in one of the printers and, while said print process is active, starting an interactive print process for the first print file in another one of the printers, and

the print service is adapted to control the printers processing said first print file to print together a total number of copies of the first print file, which is equal to the required number of copies specified in the metadata of said print file.

14. The system according to claim 13, wherein said print service includes:

a reception module for receiving a print file;

a storage for storing said print file;

an extraction module for extracting at least part of the metadata of said print file; and

a transmission module for transmitting said extracted metadata to the plurality of the printers.

15. The system according to claim 13, wherein the operator control unit of a printer includes a communication module for reporting the finishing of each copy of a print file to the print service and obtaining permission from the print service for starting printing of each new copy of said print file.

16. The system according to claim 13, wherein each of the printers further comprises:

a fetch module for fetching print data of a print file selected by an operator at a printer, from the storage of the print file.

17. The system according to claim 13, wherein the print service further includes:

a communication unit for communicating status changes of a print file to all printers which have the associated metadata.

18. The system according to claim 17, wherein the status changes include starting a print process for a copy of the print file, finishing a print process for a copy of the print file, deleting the print file, and changing the required number of copies by an operator by using the operator control unit of a printer.

19. The system according to claim 13, wherein said print service is implemented as a server connected to the network.

20. The system according to claim 13, wherein each connected printer is provided with a server process that is logically connected to the server processes in the other printers, and wherein the server processes together form a distributed print service.

21. A computer program product embodied on at least one computer-readable medium accessible by a computer, for printing digital print files in a network system including a print service and a plurality of printers, wherein a digital print file includes print image data and metadata specifying job information including a required number of copies to be printed, and wherein at least one of the printers is provided with a local memory and a local operator control unit with an inputting unit and a display and is adapted for permitting interactive printing, the interactive printing representing printing a print file only upon selection of that print file and entering a print command through the operator control unit, the computer program product comprising computer-executable instructions for:

by the print service, receiving print files, storing the received print files in a storage, and distributing information on the stored print files, including metadata, to a plurality of the printers; and

starting a print process for a first print file in one of the printers and, while said print process is active, starting an interactive print process for the first print file in another one of the printers,

wherein the print service controls the printers processing said first print file to print together a total number of copies of the first print file, which is equal to the required number of copies specified in the metadata of said print file.